

ON THE GENERA *MELANOTHRIX*, *DREPANOJANA*, *MELANERGON*, *PARACYDAS*, *COTANA*, *HYPERCYDAS*, *EPICYDAS*, AND *NERVICOMPRESSA* OF THE FAMILY *EUPTEROTIDAE* WITH DESCRIPTIONS OF NEW FORMS.

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(Plates XI, XII)

THESE genera have been founded on a number of Indo-Malayan and Papuan insects which form a very homogeneous group together with *Lasiomorpha* Joicey and Noakes, and are placed by modern workers at the head of the *Eupterotidae*. But in spite of numerous indices all pointing to the fact, it has not hitherto been realised that all the species contained in these genera are dimorphic in a most extreme manner, with the exception of the single species of *Melanergon*. Of *Lasiomorpha* we only know 3 specimens of 2 species, all 3 ♂♂.

Melanothrix was erected by Felder (in the *Erklärung der Tafeln*, LXXV-CVII, page 6, *Reise der Novara Zoologischer Theil*, Band II, Abtheilung 2), for the species he called *pulchricolor* from Java, but no diagnosis was given (for the latter refer to Hampson, *Fauna of British India, Moths*, vol. i. p. 44).

The following names and descriptions have been published: *nymphaliaria* Walk., *pulchricolor* Feld., *coryna* Swinh., *atropurpurea* Auriv., *leucotrigona* Hmps., *nicevillei* Hmps., *homochroa* Grünb., *radiata* Grünb., *lativittata* Grünb., *fumosa* Swinh., *alternans* Pagenst., and *xanthomelas* Grünb. Of these *coryna* Swinh. (= *atropurpurea* Auriv.) is the ♂ of *nymphaliaria* Walk. (= *pulchricolor* Feld.) and this species must stand thus:

***Melanothrix nymphaliaria nymphaliaria* (Walk.)**

Gnophos? *nymphaliaria* Walker, *Cat. Lepid. Ins. Brit. Mus.* vol. xxx. 5. p. 1598 (1866) (Java).

Melanothrix pulchricolor Felder, *Reise d. Novara Lepid.* IV. t. 94. f. 2. Erkl. Taf. p. 6 (Java).

Melanothrix atropurpurea Aurivillius, *Entom. Tidskr.* 1894. p. 175. No. 15 (Java).

Melanothrix coryna Swinhoe ?

There are two other subspecies of this species which I describe as new, as follows:

***Melanothrix nymphaliaria albidior* subsp. nov.**

♀ differs from *n. nymphaliaria* in the much greater extent of white on the wings and the greater extent of yellow on the sides of the abdomen.

On the forewings black of the outer one-third of the wing does not extend inwards nearly so far along, and between veins 2, 1, and inner margin, also in the basal two-thirds of wing, the black colour between veins 4 and the inner margin towards basal one-third is much reduced. On the hindwing the outer black area is only two-thirds as wide as in *n. nymphaliaria*.

Habitat. Fort de Kock, West Sumatra. 1 ♀.

Melanothrix nymphaliaria philippina, subsp. nov.

Melanothrix pulchricolor var. Semper, *Schmett. Philip.* vol. ii. (Nachtfalter), p. 387. No. 11. pl. li. f. 2 (1896-1902) (Polillo).

♀ differs from *n. nymphaliaria* in the almost entirely black forewings, a crenulate patch beyond cell and the basal half of wing below vein 1 alone being white. The black of the hindwing is also wider, occupying the outer half of wing.

Habitat. Polillo, Philippine Islands.

I have also a new species to describe, which appears to stand intermediate between the *nymphaliaria* section with almost black abdomen and the *nicevillei-leucotrigona* section with entirely yellow abdomen, having the wings of the former and abdomen of the latter.

Melanothrix intermedia sp. nov.

Head, antennae, and thorax black. abdomen golden yellow.

Forewings differ from those of *n. nymphaliaria* in the greater extent of the black of the inner two-thirds of the wing and in the teeth on the inner side of the black outer one-third being longer, so that between veins 5 and 7 they interlock with those of the black portion of the inner two-thirds.

Hindwing differs in the teeth on inner side of black outer one-third being smaller than in *n. nymphaliaria*.

Length of forewing : 38 mm. Expanse : 81 mm.

Habitat. Mergui Archipelago, 1 ♀.

The next species is *leucotrigona* Hampsn., of which the female has been wrongly identified.

Melanothrix leucotrigona Hampsn.

Melanothrix leucotrigona Hampson, *Faun. Brit. Ind. Moths*, vol. i. p. 44. fig. 27. No. 50 (1892) (Malwoon).

Dr. Grünberg has confused *leucotrigona* and *nicevillei* Hampsn. when describing the ♀ of the latter, for Dr. Grünberg's ♀ of *nicevillei* is really the ♀ of *leucotrigona*, while he figures in Seitz a ♀ of a Bornean species not identical with either.

The ♀ of *leucotrigona* is in wing pattern nearest to *nymphaliaria philippina*, but the white is less pure, the white marginal spots are larger, and the dentations on the inner side of the black outer portion of both wings are much larger and longer. Abdomen yellow.

Habitat. Burma and Tenasserim.

We next come to *nicevillei* Hampsn.

Melanothrix nicevillei Hampsn.

Melanothrix nicevillei Hampson, *Faun. Brit. Ind. Moths*, vol. iv. App. p. 450. No. 50a (1896) (Toungoo, Burma).

The ♀ of this species is undescribed. It differs from all the other species of the *nymphaliaria* section in the white areas of both wings being much more extended, its nearest ally is *radiata* Grünb.

On the forewing the black in the inner three-fourths of wing strongly reduced; in the outer area the four white marginal spots below vein 5 run in and join

the white of the inner area, reducing the black of outer area to four wedge-shaped black patches; the three white marginal spots above vein 5 run in only half across the black area, forming three white streaks.

On the hindwing all the seven white marginal spots run into and join the white discal area, reducing the black outer area to seven black wedge-shaped patches. Abdomen yellow.

Habitat. Tenasserim to Perak.

Our next species is *homochroa* Grünb.

Melanothrix homochroa Grünb.

Melanothrix homochroa Grünberg, *Entom. Rdsch.* 31 p. 21 (1914) (Kina Balu).

Dr. Grünberg in *Seitz* figures the ♀ of this insect as the ♀ of *nicevillei*, while he refers to it under his original description of his *Melanothrix nicevillei* ab. *radiata*, as being intermediate between typical ♀ *nicevillei* and his ab. *radiata* (his typical *nicevillei* being the ♀ of *leucotrigona*).

♀ differs from the ♀♀ of *nicevillei* and *leucotrigona* in being as a rule larger, in the black outer area being wider, and in the black on the inner area of the forewings being much extended. It differs also from both in the white on both wings being much purer, and is intermediate between these two species in that the white marginal spots do not join the inner white areas of both wings, but are not nearly so widely separated from them as in *leucotrigona*.

Habitat. Kina Balu, Borneo, 1 ♂, 5 ♀♀.

We now come to *radiata* Grünb.

Melanothrix radiata Grünb.

Melanothrix nicevillei var. *radiata* Grünberg, *Entom. Rdsch.* 31. p. 21 (1914) (Kina Balu).

This insect differs at a glance from ♀ of *nicevillei* in having the white replaced by buffish cream-colour, and in the black of the outer area being much wider, on the forewing at least one-third wider, and on the hindwing it takes up fully the outer half of the wing. The black is also more brownish. All the marginal spots join the inner cream area of both wings so that the black of the outer areas is in the form of seven large wedge-shaped patches on each wing.

Habitat. Kina Balu, Borneo, 3 ♀♀.

The ♂ of this and the following are unknown.

Melanothrix lativitta Grünb.

Melanothrix lativittata Grünberg, *Entom. Rdsch.* 31. p. 21 (1914) (Kina Balu).

This species calls for no special remark.

Habitat. Kina Balu, 1 ♀.

We now come to Semper's *Melanothrix pulchricolor* from Mindanao. This is evidently a quite distinct species and I describe it below.

Melanothrix semperi sp. nov.

♀. Wings similar to *nymphaliaria*, but less black. Abdomen yellow with black transverse bands.

Habitat. East Mindanao, Philippine Islands.

Our next species is *alternans* Pagenst.

Melanothrix alternans Pagenst.

Melanothrix alternans Pagenstecher ♀, *Iris*, vol. iii. p. 13 (1890) (Palawan).

Melanothrix fumosa Swinhoe ♂ (♀ errore), *Ann. Mag. Nat. Hist.* 7 (XVI). p. 142. No. 1 (1905) (Brunei. Borneo).

Here *fumosa* Swinhoe is evidently the ♂ of what we have in collections as *alternans* Pagenst. from Kina Balu. I have never seen Palawan specimens, and if they should be slightly different the Bornean form will have to stand as *Melanothrix alternans fumosa* Swinh.; but until this has been proved the name must remain for those from both islands *M. alternans* Pagenst.

Habitat. Palawan; Brunei; Kina Balu.

The last species is *xanthomelas* Grünb.

Melanothrix xanthomelas Grünb.

Melanothrix xanthomelas Grünb., *Seitz, Grossschmett. d. Erde.*

We only know the ♀ of this quite aberrant species.

Habitat. Kina Balu, Borneo.

The genus *Drepanojana* follows now.

Drepanojana fasciata Auriv.

Drepanojana fasciata Aurivillius, *Entom. Tidskr.* 1893. p. 212. No. 25 (Sierra Leone).

Drepanojana apicalis Aurivillius, *Ann. Mag. Nat. Hist.* 18 (vi) p. 353 (1896) (W. Africa).

Melanothris maeonia Druce, *Ann. Mag. Nat. Hist.* 18 (vi) p. 353 (1896) (W. Africa).

The only remark to be made here is that *maeonia* Druce and *fasciata* Aur. are the ♀♀ of *apicalis* Auriv.

Habitat. Sierra Leone.

Lasiomorpha comes here; it contains two species, one of which I describe below as new.

Lasiomorpha meeki sp. nov.

♂. Differs from *L. noakesi* by its chocolate-maroon, not purplish-black colour. Forewings differ in the costa being brilliant orange not black in the whitish semihyaline patch being regular not strongly diminished towards tornus, in the band crossing the hyaline patch not being an ill-defined sinuate band of scattered black scales, but consisting of a strong curved double band reaching from costa to inner margin, distad deep maroon-chocolate, basad orange, and in a broad streak of rufous between veins 1 and 2 from base of wing almost to transverse band.

Hindwing bright chocolate-maroon, **not** purplish chocolate-black.

Length of forewing: 38 mm. Expanse: 86 mm.

Habitat. Ougarra, Aroa River, British New Guinea, May 1908 (A. S. Meek), 2 ♂♂.

The next genus is *Melanergon* with a single species, the typical subspecies of which was included in his *Cotana* by Walker. *Melanergon* differs from *Cotana* by vein 5 of the forewing being absent, by vein 3 of that wing arising much farther from angle of cell, in the hindwing by vein 3 arising farther from angle of cell, and by the sexes being non-dimorphic. The single species *vidua* Walk. falls into 4 subspecies as follows:

Melanergon vidua vidua Walk.

Cotana vidua Walker, *List. Lepid. Ins. Brit. Mus.* Part xxxii. p. 549 (1865) (New Guinea).

Walker's type was a ♀ and the only other recorded specimen is the ♂ described below.

♂. Differs from the ♀ only in being paler, in the postmedian transverse band being more distinct, through being more densely scaled, and confined to forewing, in the frons being buff not black, and in the anal tuft being yellow not white or cream.

Habitat. New Guinea ! (♀ type); ♂ Nr. Oetakwa River, Snow Mountains, Dutch New Guinea, November and December 1910 (A. S. Meek).

Melanergon vidua proserpina B. Baker.

Melanergon proserpinus Bethune Baker, *Nov. Zool.* vol. xi. p. 372. No. 7 (1904) (Aroa River).

Differs from *v. vidua* by the more intense black colouring and by the postmedian semihyaline transverse band being broader and more strongly marked.

Habitat. South-East New Guinea.

Melanergon vidua fergussonis subsp. nov.

♂. Differs from the ♂ of *v. vidua* by the whole head, tegulae, and patagia being orange, and in having an antemedian as well as a postmedian transverse band on forewing; end of abdomen orange.

Habitat. Fergusson Island, December 1896 (A. S. Meek).

Melanergon vidua louisiadensis subsp. nov.

♀. Differs from *v. vidua* and *v. proserpina* in having hardly any trace at all of a transverse band, and in the anal tuft being dark buff.

Habitat. Sud-Est Island, Louisiade Islands, January to February 1916 (Eichhorn Bros.).

The next genus is *Paracydas* with 2 species. It differs from *Cotana* and *Melanergon* in the forewing, in having vein 4 from lower angle of cell and 5 from upper angle, and 10 not being stalked.

Paracydas biagi B. Baker.

Paracydas biagi Bethune Baker, *Novit. Zool.* vol. xv. p. 176. No. 5 (1908) (Biagi, Mambaré River).

The ♀ of this is undescribed.

♀. Antennae black; head, thorax, and abdomen intense rufous, anal segment ringed with black, anal tuft pale grey.

Forewing deep chocolate-brown; basal three-fourths of costa, base of wing, and subcostal area bright rufous; nervures rufous; a large antemedian primrose-yellow patch of raised scales on and between veins 2-5; a large postmedian curved patch white running out distad between the nervures into wedge-shaped projections; margin rufous yellow, fringe deep brown; three white spots above veins 1, 2, and 3. Hindwing deep chocolate; base of wing and abdominal area rufous clothed with long hair; nervures rufous; a row of six

postmedian intranervular white patches, those above veins 4 and 5 being the smallest; margin rufous yellow, fringe deep brown.

Length of forewing: 41 mm. Expanse: 91 mm.

Habitat. Biagi, Mambaré River, 10 ♂♂, 1 ♀.

***Paracydas postipallida* sp. nov.**

♂. Antennae deep brown; head rusty orange-brown; thorax chocolate liver-brown; abdomen rufous red.

Forewing deep liver-brown; a large antemedian grey and black stigma, a median transverse black band, outer one-third with a somewhat ill-defined postdiscal grey band and grey cloudings beyond; fringe brown.—Hindwing basal half orange suffused with brown and crossed by a dark band; outer half dull brown slightly suffused with orange and crossed by a greyish-olive band edged with serrated brownish cloud-lines.

Length of forewing: 23 mm. Expanse: 53 mm.

Habitat. Lower Aroa River, British New Guinea, November 1904 to March 1905 (A. S. Meek.)

The next genus is *Cotana*, with which I unite *Epiccydas* B. Baker. Mr. Bethune Baker differentiates this from *Cotana* because vein 10 of forewing is not stalked, but I consider this character **alone** not of sufficient importance to separate the two genera. It must have struck everyone as strange that of *Cotana* there were only ♀♀ while of the genus *Nervicompressa* only ♂♂ existed; the truth is that they are sexes having exactly the same neururation. Here we have many species and subspecies.

***Cotana castaneorufa* Rothschild.**

Cotana castaneorufa Rothschild, *Lepid. Brit. Orn. Exp. Snow Mts.* p. 79. No. 419 (1915) (Base Camp).

I described the ♀ from Dr. Wollaston's collection, but the ♂ is undescribed. ♂ antennae blackish brown; head and thorax deep chocolate liver-brown; abdomen deep orange.

Forewing chocolate liver-brown, a tiny white dot at base, an antemedian buff stigma followed by a buff transverse band distinct and broad at costal half, growing narrower and indistinct on inner half; a more or less indistinct post-discal transverse greyish-olive outwardly curved chain of half moons; fringe irregularly chequered with orange-brown.—Hindwing orange; outer two-thirds almost completely suffused with liver-brown; a brown transverse line in basal one-third and an orange one somewhat sinuate in outer one-third.

Length of forewing: 21 mm. Expanse: 49 mm.

Habitat. Snow Mountains, Dutch New Guinea; ♂ Upper Setekwa River, 200–300 ft., April 1911 (A. S. Meek).

***Cotana bisecta* sp. nov.**

♂. Antennae shaft white, peetinations dark brown; head and thorax dark brown; abdomen orange.

Forewing dark brown somewhat suffused with chestnut-rufous, a median black band, a postmedian indistinct blackish band beyond which is a lunate buffish band on the outside of which is a line of black dots joined by a chain

of indistinct blackish lunules; fringe dark brown.—Hindwing orange-yellow; an antemedian transverse line sooty black, a median indistinct blackish cloud band beyond which are two lunulate bands; fringe and margin cinnamon rufous-brown.

Length of forewing: 23 mm. Expanse: 52 mm.

Habitat. Angabunga River, British New Guinea, 6,000 ft., November 1904 to February 1905 (A. S. Meek).

***Cotana brunnescens* sp. nov.**

♂. Frons orange-rufous, vertex rufous-brown; antennae shaft orange-buff, pectinations dark brown; thorax rufescent chocolate-brown; abdomen rufous-brown.

Forewing deep chocolate liver-brown; two indistinct darker postmedian bands beyond which is a row of black dots.—Hindwing similar.

Some ♂♂ have the ground-colour of the wings much paler more greyish liver-brown, and then beyond the two transverse postmedian bands there is a distinct paler greyish-yellow or yellowish-grey lunulate band and the band of black spots has the spots connected by lunules.

♀. Head and tegulae orange-rufous, antennae black; rest of thorax and first abdominal segment greyish liver-brown; rest of abdomen rufous.

Forewing pale chocolate liver-brown; basal two-thirds of costo-subcostal area suffused with cinnamon-rufous, nervures yellowish brown, a large cream-white patch below middle of cell; a postdiscal transverse band of eight intranervular cream-white patches, the upper five being wedge-shaped, the lower three lunate, terminal ends of nervures marked with orange.—Hindwing similar, but only six cream-white patches in band all lunate.

Length of forewing: ♂ 21 mm., ♀ 34 mm. Expanse: ♂ 49 mm., ♀ 77 mm.

Habitat. Biagi, Mambaré River, N.E. New Guinea, 5,000 ft., February 1906 (A. S. Meek). 12 ♂♂, 2 ♀♀.

***Cotana pallidipascia* sp. nov.**

♂. Antennae shaft black, pectinations dark brown; head and thorax chocolate-brown; abdomen orange-brown.

Forewing pale chocolate-brown; a whitish dot in basal one-fourth below cell, an indistinct shadowy black median line, a postmedian double line inside greyish white, outside dark brown, fringe white.—Hindwing paler chocolate-brown, postmedian line very indistinct.

Length of forewing: 19 mm. Expanse: 43 mm.

Habitat. Biagi, Mambaré River, N.E. New Guinea, 5,000 ft., February 1906 (A. S. Meek). 4 ♂♂.

***Cotana aroa* B. Baker.**

Nervicompressa aroa Bethune Baker, *Novit. Zool.* vol. xi. p. 392. No. 57. pl. iv. f. 6 (1904) (Aroa River).

The ♂ only of this is described.

♀. Antennae black; head and tegulae orange; rest of thorax olivaceous brown somewhat tinged with orange; abdomen orange-rufous. Forewing chocolate-brown, nervures yellow; a large yellow patch in basal one-third of

wing below cell; a postmedian band of intranervular coalescent golden-yellow patches, the upper four wedge-shaped, the lower four arrowhead-shaped, the points of all truncated.—Hindwing same ground-colour but only six patches in postmedian band, all of which are arrowhead-shaped, the lower three only having their points truncated.

Length of forewing: 32 mm. Expanse: 71 mm.

Habitat. Aroa River, British New Guinea.

Cotana variegata sp. nov.

♂. Antennae brown; head cinnamon-rufous; thorax chestnut; abdomen orange.

Forewing basal one-fourth cream-white; in this is an oblique chocolate streak, below which is a looped zigzag line which just below streak forms a white stigma; an antemedian dark-chocolate transverse band, central one-third of wing pale chocolate becoming paler distad; outer one-third creamy grey, a crenulate postdiscal brown line, a dark-chocolate spot before tornus, and a quadrate dark-chocolate patch between vein 7 and half-way between veins 6 and 5.—Hindwing orange; a postmedian transverse crenulate dark band beyond which is a similar lunate one.

♀. Antennae black; head and tegulae orange; thorax and last two abdominal segments grey-brown; rest of abdomen deep orange. Forewing chocolate rufous-brown, nervures yellow; a round white spot below cell in basal one-third of wing, a slightly curved median darker chocolate band, a postdiscal row of eight intranervular wedge-shaped white patches, the one below costa very small.—Hindwing ground-colour and median band similar; postdiscal row of wedge-shaped patches golden yellow.

Length of forewing: ♂ 21 mm., ♀ 33 mm. Expanse: ♂ 47 mm., ♀ 74 mm.

Habitat. Upper Setekwa River and near Oetakwa River, Snow Mountains, Dutch New Guinea, 3,000–3,500 ft., August to December 1910 (A. S. Meek), 4 ♂♂, 2 ♀♀.

Cotana meeki sp. nov.

♂. Antennae shaft black, pectinations basal two-fifths orange, outer three-fifths sooty black; head, tegulae, and patagia brilliant orange; rest of thorax chocolate-rufous tinged with grey; abdomen fiery orange.

Forewing basal one-third cream-white, with an irregular somewhat hourglass-shaped rufous-chocolate patch running into middle from costa with white dot in centre, from this patch a somewhat indistinct irregular dark line runs to inner margin; median one-third chocolate bordered exteriorly by a lunulate whitish band and with the nervures white; a postmedian broad crenulate lavender-grey band edged narrowly outwardly with chocolate; outer one-fourth below vein 5 creamy white, above vein 5 chocolate with a large greyish-white apical patch.—Hindwing basal two-thirds orange, outer one-third chocolate; some indistinct darker shadow lines in basal portion and a lunulate cream band in outer one-third; marginal line cream, fringe chocolate.

♀. Antennae black; head, thorax, and abdomen fiery reddish orange, anal tuft lavender-blue. Forewing base reddish orange, costo-subcostal area for basal two-thirds orange chestnut-brown, rest of wing rufous maroon-chocolate

very thinly scaled. A large white patch in basal one-third of wing below median, a broad white postdiscal transverse band running out into long intra-nervular projections distad, the upper four of these being more pointed.—Hindwing ground-colour similar, the postdiscal band more distinctly lunulate.

Length of forewing : ♂ 22 mm., ♀ 31 mm. Expanse : ♂ 48 mm., ♀ 69 mm.

Habitat. Biagi, Mambaré River, N.E. New Guinea, 5,000 ft., March 1906 (A. S. Meek), 9 ♂♂, 8 ♀♀.

***Cotana lunulata* (B. Baker).**

Nervicompressa lunulata Bethune Baker, *Novit. Zool.* vol. xi, p. 390, No. 53. pl. iv. f. 4 (1904) (Dinawa) ♂.

The ♀ of *lunulata* is very similar to that of *meeki*, but is paler all over, and more rufescent on the wings, while the postdiscal white bands are much narrower.

I have no specimens from so low an elevation as Dinawa.

Angabunga River, British New Guinea, 6,000 ft., November 1904 to February 1905 (A. S. Meek), 8 ♂♂, 3 ♀♀; Aroa River, British New Guinea, 4,000 to 5,000 ft., May 1905 (A. S. Meek), 1 ♀.

***Cotana lunulata albaserrati* (B. Baker).**

Hypercydas albaserrati Bethune Baker, *Ann. Mag. Nat. Hist.* 8 (vi.), p. 451 (1910) (Biagi).

The ♂ resembles *l. lunulata*, but is larger; it differs at first sight in the outer one-third of forewing being much paler more yellow, and the hindwing is much brighter yellow. All transverse lines are also more distinct.

The ♀ differs from ♀ *l. lunulata* in being much darker, the white patch in basal one-third of forewing is reduced to a small dot, and the postdiscal bands are much narrower and more cream-coloured.

Habitat. Biagi, Mambaré River, N.E. New Guinea, 5,000 ft., March 1906 (A. S. Meek), 10 ♂♂, 3 ♀♀.

***Cotana lunulata occidentalis* subsp. nov.**

♂. Differs from *l. albaserrati* by the transverse line of forewing being ante-median **not** median, and the postdiscal band being much greyer. On the hindwing it differs in having the postdiscal line almost straight, being much less crenulate.

Habitat. Upper Setekwa River, Snow Mountains, Dutch New Guinea, 3,500 ft., August 1910 (A. S. Meek), 2 ♂♂.

***Cotana lunulata satisbona* subsp. nov.**

♂. Differs from *l. lunulata* in being much larger and all the transverse bands and lines much sharper and more distinct. ♀. Differs from *l. albaserrati* in being much paler yellowish rufous all over, and the anal tuft is ash-grey.

Length of forewing : ♂ *l. lunulata*, 19 mm., *l. satisbona*, 23 mm. Expanse : ♂ *l. lunulata*, 45 mm., *l. satisbona*, 54 mm.

Habitat. Goodenough Island, D'Entrecasteaux Islands, 2,500–4,000 ft., April 1913 (A. S. Meek), 8 ♂♂, 1 ♀.

***Cotana rosseliana* sp. nov.**

♂. Antennae black; head and thorax chocolate-brown; abdomen deep orange. Forewing basal three-fifths orange-brown, outer two-fifths paler

more suffused with yellow; a broad irregular subbasal dark-brown band followed by a dull yellow stigma ringed with dark brown; a curved median black-brown band; three crenulate black lines of varying sharp ness in outer two-fifths; a dark-brown patch below apex.

♀. Antennae black; head, thorax, and abdomen saffron-yellow, anal tuft sulphur-grey. Forewing saffron-yellow; a round white spot below median in basal one-third; a crenulate lunate transverse postdiscal white band.—Hindwing saffron-yellow with lunate postdiscal white line less distinct.

Length of forewing: ♂ 23 mm., ♀ 29 mm., Expanse: ♂ 54 mm., ♀ 65 mm.

Habitat. Mount Rossel, Rossel Island, Louisiade Islands, 2,100 ft., December 1915 (W. F. Eichhorn), 9 ♂♂, 2 ♀♀; Sud-Est Island, April 1898 (A. S. Meek), 1 ♀.

Cotana rosseliana diluta subsp. nov.

♀. Differs from *r. rosseliana* in the postdiscal bands being almost obliterated.

Habitat. St. Aignan, Louisiade Islands, October 1897 (A. S. Meek), 2 ♀♀.

Cotana affinis sp. nov.

♂. This species is allied to *erectilinea* B. Baker.

Antennae shafts black, pectinations brown; head brownish orange; thorax creamy cinnamon; abdomen deep orange.

Forewing basal one-third cream-white, an oblique subbasal chocolate band, and a broad dark-chocolate antemedian band, in between these two bands is a chocolate stigma with white centre; outer two-thirds of wing creamy grey washed with brown; a postmedian cream-grey band edged outwardly by a crenulated chocolate hair line; a large chocolate patch above vein 6.—Hindwing orange-yellow, bright orange at base and on inner area; two faint transverse shadow lines, fringe brown.

Length of forewing: 22 mm. Expanse: 50 mm.

Habitat. Ninay Valley, Central Arfak Mountains, Dutch New Guinea, November 1908 to January 1909 (A. E. Pratt).

Cotana erectilinea (B. Baker).

Nervicompressa erectilinea Bethune Baker, *Ann. Mag. Nat. Hist.* 6 (viii), p. 449. (1910) (Ninay Valley).

Of this species only ♂♂ are known.

Cotana erectilinea setakwensis supsp. nov.

♂. Differs from *e. erectilinea* in the forewings much yellower and the hindwings paler.

Habitat. Upper Setakwa River, Snow Mountains, Dutch New Guinea, 3,000 ft., September 1910 (A. S. Meek), 6 ♂♂.

Cotana joiceyi subsp. nov.

♂. Differs from *unistrigata* in the forewing, having the basal half buffish cream-colour, and the outer half buffish grey, **not** the whole wing pale liver-brown; the median band is more oblique and brown **not** black, and there is no stigma.

♀. Differs from the ♀ of *unistrigata* in being smaller, the white patch and postdiscal bands much larger and pure white, and the nervures and margins deep bright yellow; thorax and costal area rufous orange.

Length of forewing : ♂ 21 mm., ♀ 27 mm. Expanse : ♂ 48 mm., ♀ 60 mm.

Habitat. Angi Lakes, Arfak Mountains, 8,000 ft., Dutch New Guinea (A. C. and F. Pratt), Mus. Joicey, 6 ♂♂, 4 ♀♀.

***Cotana bakeri* (Joicey and Talbot).**

Nervicompressa bakeri Joicey and Talbot, *Ann. Mag. Nat. Hist.* 20 (viii). p. 65. pl. 111. f. 15 (1917) (Wandammen Mts.).

Only the ♂ type known.

***Cotana albomaculata* (B. Baker).**

Nervicompressa albomaculata Bethune Baker ♂, *Novit. Zool.* vol. xi. p. 391. No. 54. pl. iv. f. 3. (1904) (Dinawa).

Epicydas ovata Bethune Baker ♀, *Novit. Zool.* vol. xv. p. 175. No. 3. (1908) (Ekeikei).

Only the ♂ type of *albomaculata* and the ♀ type of *ovata* are known.

***Cotana kebeae* (B. Baker).**

Nervicompressa kebeae Bethune Baker, *Novit. Zool.* vol. xi. p. 391. No. 56. pl. iv. f. 10. (1904) (Mt. Kebeae).

Only ♂♂ of this species are known. In the Tring Museum from Biagi, Mambaré River, N.E. New Guinea, 5,000 ft.; March 1906. 2 ♂♂. Angabunga River, British New Guinea, 6,000 ft., November 1904 to February 1905 (A. S. Meek), 2 ♂♂.

***Cotana kebeae grandis* subsp. nov.**

♂. Much larger than *k. kebeae*; the thorax dark brown **not** pale cinnamon; the abdomen deeper and fierier orange; the forewing much darker brown with much heavier, more distinct, and broader transverse bands; the hindwing deeper orange with more distinct bands.

Length of forewing : *k. kebeae*, 21 mm. Expanse : 48 mm. Length of forewing : *k. grandis*, 24 mm. Expanse : 56 mm.

Habitat. Upper Setekwa River, Snow Mountains, Dutch New Guinea, 3,000 ft., August 1910 (A. S. Meek), 2 ♂♂.

***Cotana rubescens* Walk.**

Cotana rubescens Walker ♀, *List Lepid. Ins. Brit. Mus.* Part 32 (Suppl. II). p. 549. (1865) (New Guinea).

Nervicompressa unistrigata Bethune Baker, *Novit. Zool.* vol. xi. p. 390. No. 52. pl. iv. f. 5. (1904) (Dinawa) ♂.

Hypercydas turneri Bethune Baker, *Novit. Zool.* vol. xv. p. 175. No. 1. (1908) (Kebea and Mafulu) ♀.

This species is the type of the genus *Cotana*. It is in the Tring Museum from Biagi, Mambaré River, N.E. New Guinea, 5,000 ft., March 1906 (A. S. Meek), 1 ♂; Milne Bay, S.E. British New Guinea, January 1899 (A. S. Meek), 1 ♂; Aroa River, British New Guinea, March 1905 (A. S. Meek), 1 ♂; Port Moresby, British New Guinea (Mr. Rattle) 1 ♀; Welsh River, British New Guinea (Weiske), 1 ♀; Mount Alexander to Mount Nisbet, Owen Stanley Range, British New Guinea, January 1896 (A. S. Anthony), 1 ♀; Aru Islands (H. Kühn), 1 ♀.

***Cotana rubescens kapaura* subsp. nov.**

♂. Differs from ♂ *r. rubescens* in the very blunt rounded apex to the forewings, in the uniform bright cinnamon **not** umber-brown colour of the

forewings, in the broader and blacker transverse bands, and in the larger and more distinct stigma.

♀. Differs from the ♀ of *r. rubescens* in its paler ground-colour, in the saffron-yellow costal area and more yellow basal two-fifths of forewings, and in the less distinct and partly obsolete postdiscal bands of yellow wedge-shaped and lunate spots.

Habitat. Kapaur, Dutch New Guinea, December 1896 (W. Doherty), 1 ♂, 1 ♀.

***Cotana rubescens oetakwensis* subsp. nov.**

♂. Differs from ♂ of *r. rubescens* in the bright cinnamon-orange colour of the forewings, in the very strongly marked and large stigma, and in the very broad heavy transverse median bands, both stigma and bands being of intense velvety black.

Habitat. Nr. Oetakwa River, Snow Mountains, Dutch New Guinea, 2,500 ft., October to December 1910 (A. S. Meek), 2 ♂♂.

***Cotana germana* sp. nov.**

♂. This species is very closely allied to *rubescens* in the ♂ and to *joiceyi* in the ♀.

Differs from *rubescens* ♂ in the paler less chestnut-brown of the forewings and in the much thinner and less strongly marked transverse bands; in the much paler and almost patternless hindwings. The transverse band of the forewing is also more concavely curved.

♀. Antennae black; head orange; thorax chestnut-brown; abdomen rufous orange, anal tuft whitish grey.

Forewing liver-chestnut; a white spot below median in basal one-third of wing, a median slightly sinuate darker band, nervures and marginal line yellow, a postdiscal coalescent band of intranervular white wedge-shaped patches truncated distad. Hindwing similar in ground-colour, but band of white patches lunate.

Habitat. Aroa River, British New Guinea, March 1905 (A. S. Meek), 3 ♂♂, 1 ♀.

***Cotana calliloma* (Turner).**

Hypercydas calliloma Turner, *Trans. Roy. Soc. S. Austr.* vol. xxvii. p. 23. (1902-3) (Queensland).

Of this species the only specimen hitherto recorded in Europe is the ♀ in the Tring Museum from the Barnard collection from Barnard Islands bred December 29th, 1891; as all those attributed to this species from New Guinea are not the same.

***Cotana dubia* (B. Baker).**

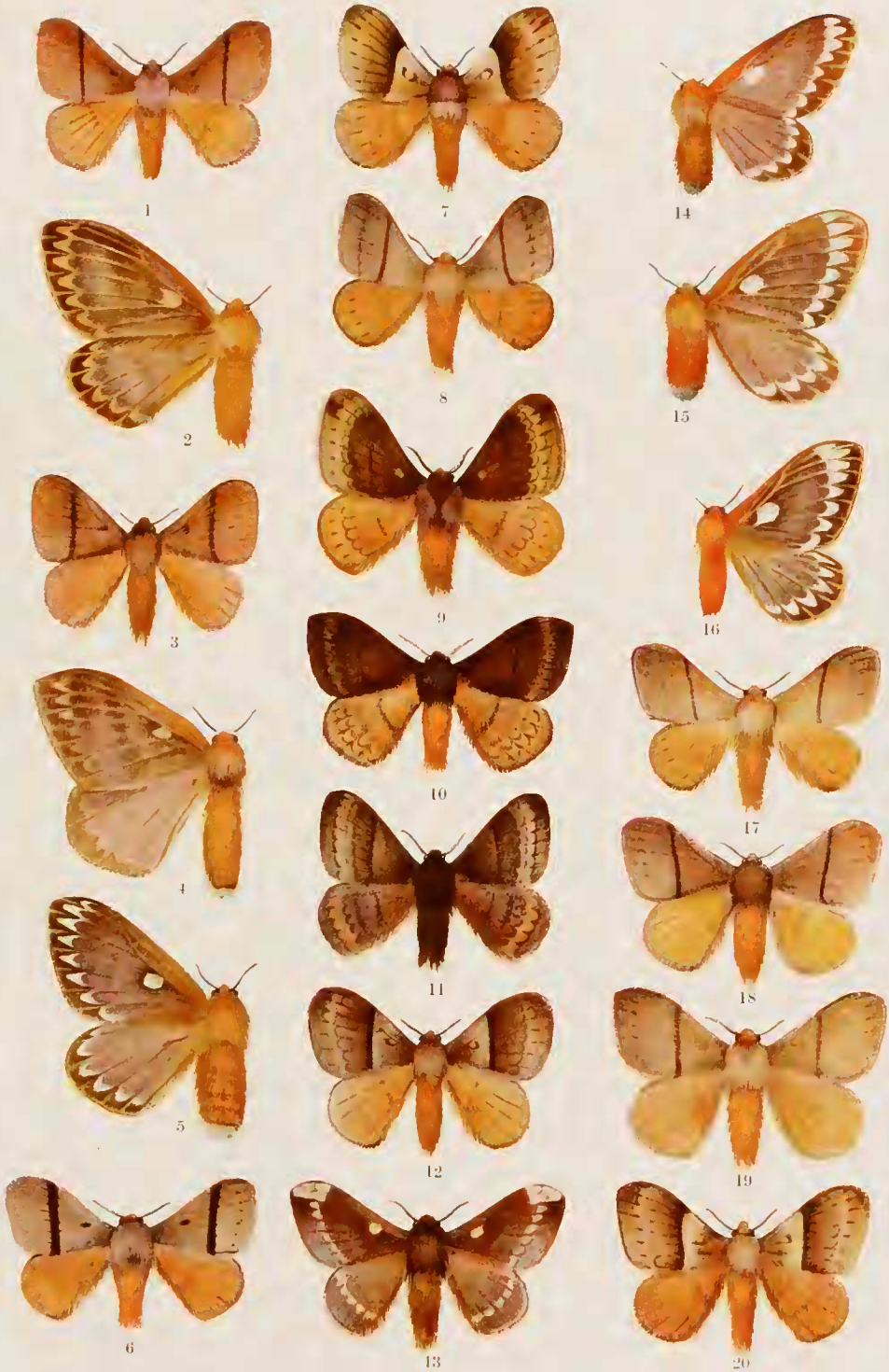
Nervicompressa dubia Bethune Baker ♂, *Novit. Zool.* vol. xi. p. 391. No. 55. pl. iv. f. 19. (1904) (Dinawa).

Hypercydas doricrana Bethune Baker ♀, *Novit. Zool.* vol. xv. p. 175. No. 2. (1908) (Aroa River).

Habitat. Aroa River, British New Guinea, November 1904 to February 1905 (A. S. Meek), 7 ♂♂, 9 ♀♀; Upper Setekwa River, Snow Mountains, Dutch New Guinea, 3,000 ft., September 1910 (A. S. Meek), 11 ♂♂, 3 ♀♀; Base Camp, Utakwa River, Dutch New Guinea, November 1912 (A. F. R. Wollaston), 2 ♂♂; Milne Bay, S.E. British New Guinea, November 1898 (A. S. Meek), 3 ♀♀.

EXPLANATION OF PLATE XL.

No.	1.	<i>Cotana germana</i>	Rothsch.	♂	.	.	.	.	.	.	p. 474
"	2.	"	<i>rubescens</i>	Walk.	♀	-	-	-	-	-	p. 474
"	3.	"	"	♂	.	.	.	.	.	.	p. 474
"	4.	"	<i>kapaura</i>	Rothsch.	♀	-	-	-	-	-	p. 473
"	5.	"	<i>calliloma</i>	Rothsch.	♀	.	.	.	.	.	p. 474
"	6.	"	<i>rubescens oetakwensis</i>	Rothsch.	♂	-	-	-	-	-	p. 474
"	7.	"	<i>erectilinea setakwensis</i>	Rothsch.	♂	.	.	.	.	.	p. 472
"	8.	"	<i>kebeae</i> (B. Baker)	♂	-	-	-	-	-	-	p. 473
"	9.	"	<i>lunulata albaserrati</i> (B. Baker)	♂	.	.	.	.	.	.	p. 471
"	10.	"	<i>lunulata</i> (B. Baker)	♂	-	-	-	-	-	-	p. 471
"	11.	"	<i>brunnescens</i>	Rothsch.	♂	.	.	.	.	.	p. 469
"	12.	"	<i>erectilinea</i> (B. Baker)	♂	-	-	-	-	-	-	p. 472
"	13.	"	<i>albomaculata</i> (B. Baker)	♂	.	.	.	.	.	.	p. 473
"	14.	"	"	♀	-	-	-	-	-	-	p. 473
"	15-16.	"	<i>joiceyi</i>	Rothsch.	♀	.	.	.	.	.	p. 472
"	17.	"	"	♂	-	-	-	-	-	-	p. 472
"	18.	"	<i>germana</i>	Rothsch.	♂ (ab ?)	p. 474
"	19.	"	<i>bakeri</i> (Joicey & Talbot)	♂	-	-	-	-	-	-	p. 473
"	20.	"	<i>erectilinea</i> (B. Baker)	♂ (ab)	p. 472



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EXPLANATION OF PLATE XII.

No.	1.	<i>Cotana dubia</i> (B. Baker)	♂	p. 474
"	2.	"	"	♀	-	-	-	-	-	p. 474
"	3.	"	<i>variegata</i> Rothsch.	♂	p. 470
"	4.	"	"	♀	-	-	-	-	-	p. 470
"	5.	"	<i>meeki</i>	"	♂	.	.	.	.	p. 470
"	6.	"	"	"	♀	-	-	-	-	p. 470
"	7.	"	<i>aroa</i> (B. Baker)	♂	.	.	.	.	.	p. 469
"	8.	"	<i>rosseliana diluta</i> Rothsch.	♀	-	-	-	-	-	p. 472
"	9.	<i>Paracydas biagi</i> B. Baker	♂	.	.	.	.	.	.	p. 467
"	10.	"	"	♀	-	-	-	-	-	p. 467
"	11.	"	<i>postpallida</i> Rothsch.	♂	.	.	.	.	.	p. 468
"	12.	<i>Cotana kebeae grandis</i>	"	♂	-	-	-	-	-	p. 473
"	13.	"	<i>kebeae</i> (B. Baker)	♂ (type)	.	.	.	.	.	p. 473
"	14.	"	<i>brunnescens</i> Rothsch.	♀	-	-	-	-	-	p. 469
"	15.	"	<i>lunulata albaserrati</i> (B. Baker)	♀	.	.	.	.	.	p. 471
"	16.	"	<i>lunulata</i> (B. Baker)	♀	-	-	-	-	-	p. 471
"	17.	"	<i>lunulata satisbona</i> Rothsch.	♂	.	.	.	.	.	p. 471
"	18.	"	"	"	♀	-	-	-	-	p. 471
"	19.	"	"	<i>occidentalis</i> Rothsch.	♂	.	.	.	.	p. 471



H. Gronegold, del



SOME NEW MOTHS OF THE FAMILIES *ARCTIIDAE* AND *EUPTEROTIDAE*.

By LORD ROTHSCHILD, F.R.S., PH.D.

ARCTIIDAE.

1. *Robinsonia irregularis*, sp. nov.

♂. Pectus dirty yellow; antennae shafts black, serrations grey; head olive-grey-brown, five white dots on frons, one white spot on vertex; tegulae olive-grey-brown with two white patches, patagia white edged with olive-grey-brown, rest of thorax olive-grey-brown with a median orange line and two lateral white tufts; abdomen orange, subdorsal bands reaching to penultimate segment sooty grey.

Forewings olive-brown-grey, a white dot in cell, a large irregular white patch below median, an elongate streak-like white patch below vein 1, six irregular intranervular elongate white patches beyond middle of wing, an indistinct white submarginal spot between veins 1 and 2.

Hindwings semivitreous white, a pale-grey patch on and around tornus. Length of forewing: 19 mm. Expanse: 42 mm.

Habitat. Cuyaba, Matto Grosso (Paul Zobrys), 1 ♂.

2. *Neidalia irrorata*, sp. nov.

♂. Antennae, head, and thorax tawny orange tinged and somewhat suffused with scarlet; abdomen orange clothed with long hair mixed orange and crimson.

Forewing golden yellow densely freckled and irrorated with scarlet, an ante- and a postmedian line and fringe brown-grey; a scarlet stigma with a grey point.—Hindwing orange-scarlet tinged with pale crimson. ♀ larger, antennae buffish brown; head and thorax golden orange suffused with red; abdomen rosy salmon colour, anal segment and tuft golden buff. Forewing golden yellow much less freckled and irrorated with scarlet than in the ♂, nervures scarlet, ante- and postmedian bands scarlet with a few grey marks, fringe and distal half of inner margin brown-grey.—Hindwing salmon colour.

Length of forewing: ♂ 15 mm., ♀ 22 mm. Expanse: ♂ 34 mm., ♀ 50 mm.

Habitat. Yahuarrajo, South-East Peru. 1,200 ft., February—March 1912 (H. and C. Watkins), 1 ♂, 1 ♀.

3. *Idalus albidior*, sp. nov.

♀. Pectus white suffused and freckled with crimson; antennae grey-brown, outer one-third white; head white; tegulae white edged with pale crimson, patagia white with a golden and two pale-crimson patches; rest of thorax white with two pale-crimson lines and two grey dots posteriorly; abdomen first three segments rose-crimson with two dorsal white dots, rest of segments creamy white slightly tinged with rose at the edges.

Forewing white, base with two slate-grey dots, four subbasal elongate slate-grey spots of various lengths, basal half of cell slate-grey, distal half yellow;

below median is a yellow patch, an oblique slate-grey median band narrowing from costa and reaching origin of vein 3, below vein 3 to inner margin somewhat more distad runs a grey-brown band, a yellow tinge on cloud just beyond band between veins 3 and 6, a dark-grey dot above vein 5.—Hindwing white.

Length of forewing: 18 mm. Expanse: 41 mm.

Habitat. Las Quignas, Venezuela (S. M. Klages).

4. *Idalus affinis*, sp. nov.

♂. Allied to *admirabilis* Cram.; differs from that species in the patagia and thorax being mixed with grey, in the slate-grey median band of forewing being much expanded below vein 3, and entirely coalescing with the baso-subbasal slate patch below vein 1, and in having a pink spot at tornus.

Length of forewing: 16 mm. Expanse: 37 mm.

Habitat. Sta. Catharina, 1 ♂.

5. *Zatrephes lentiginosus*, sp. nov.

♂. Pectus white: palpi cream colour with a few scattered scarlet freckles; antennae amber-brown, basal joint scarlet; head scarlet freckled with buff; thorax buff freckled with scarlet; abdomen buff freckled with scarlet and clothed with long buffish cream hairs.

Forewing brownish buff freckled all over with scarlet, a cream spot ringed with scarlet above vein 4.—Hindwing golden buff, costal area white, fringe and margin scarlet mixed with buff, outer half of wing between veins 2 and 4 freckled with scarlet.

Length of forewing: 15 mm. Expanse: 34 mm.

Habitat. St. Jean de Maroni, French Guiana, 3 ♂♂.

6. *Zatrephes albotestacea*, sp. nov.

♂. Pectus white; antennae pale brown; head greyish cream colour freckled with scarlet; thorax greyish cream colour; abdomen slightly darker.

Forewing greyish cream colour with a few scattered scarlet scales; ante- and a postmedian pale greenish-grey shadow lines an irregular reniform hyaline patch edged with dark crimson between veins 3 and 5; fringe irrorated with crimson, white between veins 2 and 4.—Hindwing greyish golden buff, costal area cream; fringe greyish brown ♀ much larger, a dead greyish cream colour, hindwings bright cream-buff.

Length of forewing: ♂ 15 mm., ♀ 20 mm. Expanse: ♂ 34 mm, ♀ 46 mm.

Habitat. St. Jean de Maroni, French Guiana, 3 ♂♂, 2 ♀♀.

7. *Zatrephes rosella*, sp. nov.

♂. Pectus white; antennae grey-brown, basal one-fourth of shaft freckled with crimson; head and thorax cream-white freckled with crimson; abdomen pale crimson, anal tuft cream freckled with crimson.

Forewing cream-buff freckled with crimson; an antemedian indistinct line, a similar postmedian line below vein 3 and various cloudings beyond middle of wing olive-grey; a large irregular vitreous patch edged with olive-grey between veins 3 and 7.—Hindwing pale crimson. ♀ with less olive-grey

clouding on forewing, with ante- and postmedian lines more distinct and hindwings paler more rose-pink.

Length of forewing: ♂♀ 15 mm. Expanse: 34 mm.

Habitat. La Union Rio Huacamayo Carabaya, South-East Peru, 2,000 ft., November 1904 (G. Oekenden), 1 ♀; French Guiana, Nouveau Chantier, May, 1 ♂ Type; St. Jean de Maroni, French Guiana, 5 ♂♂.

8. *Amaxia maroniensis*, sp. nov.

♂. Peetus white; antennae black, basal one-fifth amber-yellow, apical one-fifth white; head golden yellow; tegulae golden yellow, patagia sooty purplish grey with shoulder patch golden yellow edged with erimson and some pink hair on edge, rest of thorax sooty purplish grey; abdomen sooty purplish grey, two last segments golden yellow, lateral scarlet stripes which join on dorsal line on penultimate segment.

Forewing costal area from base and outer three-fifths of wing golden yellow, basal two-fifths of wing except costal area sooty purplish grey with scarlet edging and nervures, basal one-third of vein 1 broadly a mixture of scarlet and yellow, a yellow median spot with scarlet ring below vein 1; a subterminal row of seven grey dots, disc of wing with a number of grey spots, four of which towards apex are larger, contiguous, and more or less edged with scarlet.—Hindwing yellowish salmon-rose; costal area whitish, a large subterminal sooty-grey elongate patch.

Length of forewing: 16 mm. Expanse: 37 mm.

Habitat. St. Jean de Maroni, French Guiana, 1 ♂.

9. *Eriostepta pseudamaxia*, sp. nov.

♂. Peetus white, forecoxae pink, foretibiae erimson; antennae brown, tip white, basal segment erimson; frons dark grey with white spot, vertex golden yellow with some crimson dots; tegulae dark grey with a golden scarlet-edged spot, patagia dark grey with outer half white and a basal yellow scarlet-edged spot, rest of thorax dark grey with scarlet dots; abdomen pale scarlet-erimson, anal tuft dirty yellow.

Forewing basal half obliquely dark grey very irregular and jagged on distal edge and with several yellow scarlet-edged spots the veins being mostly scarlet; outer half yellow, six marginal fuscous dots; at apex of cell and between veins 5 and 8 four quadrate erimson-edged dark-grey patches irregularly placed.—Hindwing creamy white washed with yellow, a dark-grey terminal patch below apex.

Length of forewing: 15 mm. Expanse: 33 mm.

Habitat. St. Jean de Maroni, French Guiana, 1 ♂.

10. *Paranerita postrosea*, sp. nov.

♂. Antennae dark brown, outer one-fourth white; head golden yellow with red line behind vertex; thorax dark mauve-grey; abdomen erimson, anal tuft yellow.

Forewing basal half obliquely dark mauve-grey, the distal side somewhat irregular with a tooth under cell; outer half lemon-yellow with large ovoid subapical mauve-grey patch.—Hindwings rose-pink. ♀ differs in the mauve-

grey areas of forewing being much darker and strongly suffused with crimson, in the hindwings being suffused with yellow, and in the abdomen being darker more crimson-scarlet.

Length of forewing: ♂ 13 mm, ♀ 11 mm. Expanse: ♂ 29 mm., ♀ 25 mm.

Habitat. Caracas, Venezuela, 3 ♂♂, 7 ♀♀; San Esteban, Venezuela, July 1909 (S. M. Klages), 5 ♂♂; Las Quignas, Venezuela (S. M. Klages), 2 ♂♂; St. Jean de Maroni, French Guiana, 1 ♀.

11. *Paranerita diversa*, sp. nov.

♂. Antennae dark brown, outer one-third white; head golden yellow; thorax cinnamon-mauve-purple; abdomen scarlet, anal tuft yellow.

Forewing basal half very obliquely cinnamon-mauve-purple edged with scarlet; outer half golden yellow, a large subapical ovoid patch mauve-purple. —Hindwing cream-white irregularly suffused with yellow. ♀ larger, differs in having the subapical patch joined to basal half of wing by a broad band of same colour and ringed with scarlet, and in the hindwing being semivitreous and suffused with pale pink.

Length of forewing: ♂, 14 mm, ♀ 17 mm. Expanse: ♂ 31 mm., ♀ 38 mm.

Habitat. San Esteban, Venezuela, June 1909 (S. M. Klages), 6 ♂♂, 2 ♀♀; Las Quignas, Venezuela (S. M. Klages), 1 ♀; Merida, Venezuela, November 1898 (Briceño), 1 ♂.

12. *Paranerita plagosa*, sp. nov.

♀. Antennae dark brown, outer two-fifths white; head yellow broadly edged with scarlet; tegulae scarlet with golden-yellow central spot, patagia basal half scarlet with dull yellow marks, outer half mauve-brown, rest of thorax mauve-brown; abdomen dark brick-red.

Forewing dark purplish brown-grey; a trilobed subbasal golden-yellow patch edged with scarlet, a wedge-shaped golden patch edged with scarlet from middle of costa to median nervure, two irregular golden terminal patches edged with scarlet, three dull-scarlet marks round about vein 1. —Hindwings dark salmon with broad sooty marginal band.

Length of forewing: 14 mm. Expanse: 31 mm.

Habitat. St. Jean de Maroni, French Guiana, 1 ♀.

13. *Paranerita translucida*, sp. nov.

♂. Antennae amber-brown; head dull lemon-yellow; thorax mouse-grey; abdomen dull brick-red, anal tuft buff.

Forewing vitreous; basal two-fifths and large ovoid apical patch mouse-grey, median three-fifths of costa dirty buff. —Hindwing buff suffused irregularly with mouse-grey.

Length of forewing: 12 mm. Expanse: 26 mm.

Habitat. La Union, Rio Huacamayo, Carabaya, 2,000 ft., December 1904 (G. Oekenden), 1 ♂.

14. *Paranerita kennedyi*, sp. nov.

♂. Antennae black-brown, tip paler; head golden yellow; thorax mauve-grey; abdomen scarlet-crimson, anal tuft buff.

Forewing outer half obliquely golden yellow; basal half and large very

irregular subapical patch mauve-grey with here and there on the edges scarlet streaks, the subapical patch joined to the basal part of wing by an irregular bar of same colour as themselves.—Hindwing pale pink.

Length of forewing : 14 mm. Expanse : 31 mm.

Habitat. Minas Geraës (Kennedy), 1 ♂.

15. *Paranerita rubrosignata*, sp. nov.

♂. Antennae brown ; head mixed golden yellow and scarlet ; thorax dark grey ; abdomen dark brick-crimson.

Forewing basal three-fifths except costa obliquely sooty grey, outer two-fifths yellow with various scarlet spots and rings.—Hindwings yellowish pink.

Length of forewing : 11 mm. Expanse : 24 mm.

Habitat. St. Jean de Maroni, French Guiana, 1 ♂.

16. *Hyponerita curta*, sp. nov.

♂. Nearest to *ockendeni* Rothsch., but at once distinguished by its stumpy truncated shape as if trimmed with a pair of scissors.

Antennae basal one-third scarlet, outer one-third white, centre one-third dark brown ; head golden yellow edged behind with scarlet ; thorax cinnamon-purple ; abdomen brick-red, a snow-white patch on basal segment.

Forewing cinnamon-purple ; a large wedge-shaped blunted yellow patch edged with scarlet runs in from costa beyond cell, and a smaller similar but more pointed patch runs in from centre of termen, a small apical similar spot, and two similar dots between this and terminal wedge.—Hindwings orange-buff tinged with red.

Length of forewing : 12 mm. Expanse : 27 mm.

Habitat. St. Jean de Maroni, French Guiana, 2 ♂♂.

17. *Neritos subgaudialis*, sp. nov.

♂. Nearest to *gaudialis* Schaus, but much duller and without the subbasal yellow band.

Antennae brown ; head and throx dirty grey-brown suffused with scarlet ; abdomen scarlet with dot on basal segment and anal tuft dull yellow.

Forewing salmon-pink irrorated and clouded with sooty grey-brown, some indistinct subbasal scarlet markings with a minute yellow dot, a yellow scarlet-lined wedge runs in from costa, an irregular yellow patch with some dark dots in it on termen, and a small yellow apical spot.—Hindwings salmon colour.

Length of forewing : 17 mm. Expanse : 37 mm.

Habitat. St. Jean de Maroni, French Guiana, 4 ♂♂.

18. *Antaxia similis*, sp. nov.

♂. Similar to *meridionalis* Schaus, but duller and more apple-green, not sulphur-yellow.

Antennae with longer pectinations and black **not** brown with pale tips ; head and thorax distinctly apple-green, borders of patagia only somewhat intermixed with maroon and crimson hairs **not** entirely maroon and crimson ; abdomen duller brick-red intermixed with yellowish green.

Forewing with the dark markings mauve-purple not brown-purple, and the subapical patch is joined to the discal patch above vein 2 by a broad oblique

band; the scarlet markings and nervures are replaced by dull pink.—Hindwings much paler pink.

Habitat. Oconeque, Carabaya, 7,000 ft., July 1904 (G. Ockenden), 1 ♂.

18A. *Automolis reducta sordida*, subsp. nov.

♂♀. Differ from *r. reducta* in the dark bands of the forewings being dull smoky brown *not* metallic lavender colour.

Habitat. Rio Janeiro, 2 ♂♂, 1 ♀ (♀ Type).

19. *Automolis decisa*, sp. nov.

♀. Near *coacta* Dogn.

Differs in having shorter, narrower, and more pointed forewings and hindwings.

Thorax pure white with pale rose and ochre spots; abdomen not so deep crimson.

Forewing pure white; median band wider, less constricted and slightly angled at vein 6, nervures in band yellowish grey *not* white as in *coacta*, basal black marks shorter, an ochre mark between the band and basal streaks.—Hindwing white tinged with pink.

Length of forewing: *coacta* ♀ 24 mm., *decisa* 19 mm.

Breadth „ „ „ ♀ 12 mm., „ 9 mm.

Expanse „ „ „ ♀ 54 mm., „ 43 mm.

Habitat. St. Jean de Maroni, French Guiana, 1 ♂.

20. *Automolis sublineata*, sp. nov.

♂. Closely allied to *lineosa* Walk., but much less vitreous.

Differs on patagia by want of the small black spot.

Forewing pale cadmium yellow **not** semivitreous, white in apical two-fifths, mouse-grey in basal three-fifths; costa and intranervular streaks broadly or narrowly lavender grey, nervures and inner marginal streak black; yellow in basal part of wing darker cadmium.—Hindwing less semivitreous, pale cream-yellow tinged with pale salmon. The most striking difference apart from colour is the entire absence of the marginal black wedge spots at the end of the nervures, which are very conspicuous in *lineosa*.

Length of forewing, *lineosa* 18 mm., *sublineosa*, 20 mm.

Expanse „ „ „ 40 mm. „ 45 mm.

Habitat. Jinguri, Carabaya, 3,100 ft., August 1904, 1 ♂ (Type); Santo Domingo, Carabaya, 6,500 ft., December 1902, 3 ♂♂; La Oroya, Rio Inambari, Peru, 3,100 ft., September 1904 (G. Ockenden), 1 ♂.

21. *Automolis perlineosa*, sp. nov.

♀. This has been identified as *lineosa* by Mr. Schaus.

Differs from *sublineosa* in having the basal three-fifths of forewing mouse-grey as in *lineosa*, but the distal two-fifths are yellow *not* white, and there are **no** terminal wedge spots; the area each side of vein 1 deep cadmium yellow.—Hindwings salmon-pink.

Length of forewing: 21 mm. Expanse: 47 mm.

Habitat. Juan Vinas, Costa Rica (W. Schaus), 1 ♀; Costa Rica (Underwood),

1 ♀.

22. *Automolis garleppi maronensis*, subsp. nov.

♂. Differs from *g. garleppi* in its smaller size, and the much-reduced size of the leaden patches of the forewing.

Length of forewing : *A. g. garleppi*, 24 mm., *A. g. maronensis*, 21 mm.

Expanse of forewing : *A. g. garleppi*, 56 mm., *A. g. maronensis*, 48 mm.

Habitat. St. Jean de Maroni, French Guiana, 2 ♂♂.

23. *Automolis soror*, sp. nov.

♀. Allied to *inexpectata* Rothsch.

Differs in the abdomen being entirely orange-yellow and the fore- and hindwings entirely mouse-grey, with in the forewings a median whitish band narrowing to inner margin and in the hindwings to patches of similar colour.

Habitat. Amazonas (Meyer coll.), 1 ♀.

24. *Automolis moma tenuifascia*, subsp. nov.

♀. Differs from *m. moma* in the yellow bands of the forewings being much narrower and paler and in the light basal area of hindwing being smaller.

Habitat. Sta. Catharina, Brazil, 1 ♀.

25. *Elysium subterra*, sp. nov.

♂. Intermediate between *terra* Druce, and *felderi* Rothsch., having the first abdominal segment orange as in *felderi*, but the orange rings and lateral patches on the last four segments are absent as in *terra*.

Habitat. Huancabamba, Cerro de Pasco, Peru (E. Boettger), 1 ♂.

26. *Elysium meridionalis*, sp. nov.

♀. Resembles ♀ *superba*, Druce but much paler ; the black bands on abdomen are narrower and more broken into spots and the pale bars on forewing are much narrower, and the first one after the base is only present from inner margin to above fold between vein 1 and median ; the black patch at base of forewing is replaced by three minute black dots as is the case in the majority of specimens of *E. hampsoni* Dogn.

Habitat. Bahuru, São Paulo, September 14th, 1886, 1 ♀.

27. *Elysium underwoodi*, sp. nov.

♀. Allied to *francki* Schaus.

Antennae brown ; head and thorax brownish brick-red ; abdomen brick-red with large central black patch.

Forewing dull brick-red irrorated closely with dull grey-brown.—Hindwing dull pale pink, darkest distad.

Length of forewing : 24 mm. Expanse : 55 mm.

Habitat. Carri Blanco, Costa Rica (Underwood), 1 ♀.

28. *Elysium francki castrensis*, subsp. nov.

♂♀. Differ at a glance from *f. francki* in the entire absence of the pale strigilation on the forewing. The ♀ has much brighter more rose-carmine hindwings.

Habitat. Castro Parana, February 1898 (D. Jones), 1 ♂, 2 ♀♀.

29. *Opharus catharinae*, sp. nov.

♀. Allied to *flavipunctata* Herr.-Sch., but much darker. The black-brown markings of thorax are replaced by deep black; the pale orange of thorax and abdomen are replaced by deep reddish orange. On the forewing the dark marks are deep black **not** sooty brown, and on the disc beyond postmedian band are two large black cloud patches, and the postdiscal dark marks all have orange centres; the lemon-yellow spots of *flavipunctata* are all replaced by dark greenish-orange spots, while the ground-colour of the forewings is rich cinnamon-brown **not** cinnamon-grey and the hindwing is cinnamon-brown strongly clouded with black **not** greyish white.

Length of forewing: ♀ *catharinae* 34 mm. Expanse 77 mm.

„ „ ♀ *flavipunctata* 31 mm. „ 71 mm.

Habitat. Sta. Catharina, 2 ♀♀.

30. *Halisidota luridioides*, sp. nov.

♂♀. Nearest to *lurida* H. Edw., but much shorter and blunter in both wings and much broader.

Differs by the apex of both wings being less produced and in the wings being much wider; the abdomen is blacker; the brownish streaks and strigulations are more distinct and longer so that the general colour appears much darker.

Length of forewing: *lurida* ♂ 25-30 mm., ♀ 29-33 mm.

„ „ „ *luridioides* ♂ 25-29 mm., ♀ 25-27 mm.

Breadth of forewing: *lurida* ♂ 8-12 mm., ♀ 10-12 mm.

„ „ „ *luridioides* ♂ 12-15 mm., ♀ 11-12 mm.

Expanse of forewing: *lurida* ♂ 56-66 mm., ♀ 65-73 mm.

„ „ „ *luridioides* ♂ 56-64 mm., ♀ 56-60 mm.

Habitat. Monte Tolima, Columbia, 3,200 metres = 10,400 ft., January 1910 (A. H. Fassl.), 1 ♂♂; St. Javier, Rio Cachabi (Flemming and Miquetta), 1 ♀; Sto. Domingo, Carabaya, 6,000 ft., November 1902 (G. Oeckenden), 1 ♀.

31. *Halisidota pseudofalacra*, sp. nov.

♂. Similar to *falacra* Dogn., but smaller and with much narrower wings.

♀. Antennae, head, and thorax dirty cream colour; abdomen similar, but greyer.

Forewings cream colour freckled irregularly with pale brown; a black stigma at lower angle of cell.—Hindwings cream colour.

Length of forewing: ♀ 20 mm. Expanse: 44 mm.

Habitat. San Ramon, Nicaragua, 375 ft., June 1905 (Palmer), 1 ♂.

32. *Diacrisea oriens*, sp. nov.

♂. Antennae black; head lemon-yellow, back of vertex orange; thorax lemon-yellow, hind edge of tegulae orange; abdomen deep orange with black bands except on last and first segments.

Forewing lemon-yellow.—Hindwing paler lemon. ♀ similar, but larger.

Length of forewing: ♂ 22 mm., ♀ 28 mm. Expanse: ♂ 50 mm., ♀ 64 mm.

Habitat. Tsūmel, South-West African Protectorate, 1 ♂, 1 ♀.

33. *Diacrisia nigrocastanea*, sp. nov.

♀. Pectus and whole undersurface of body black; antennae black; head and thorax olivaceous rufous; abdomen olivaceous orange, five black spots on median segments, a large black patch on last two segments.

Forewings olivaceous rufous-brown.—Hindwings basal three-fifths olivaceous cinnamon-orange, outer two-fifths black.

Length of forewing: 18 mm., Expanse: 41 mm.

Habitat. Lilongwe, Angoniland, February 2, 1910 (Andrews), 1 ♀.

34. *Diacrisea eichhorni*, sp. nov.

♂. Pectus and legs black, base of fore-coxae reddish; antennae black, head yellowish isabelline buff; tegulae and patagiae cinnamon-buff, the former with a scarlet dot near head the latter with a black patch at base, central mass of thorax black; abdomen bright crimson, a line of central black dots on all but last two segments, anal tuft brownish yellow.

Forewing greyish cinnamon-buff; three small black dots at base, an ante-median band of four large black spots, a broken broad median black band and two postmedian bands of black spots, the inner largest, from vein 8 to vein 4, a black dot at tornus.—Hindwing basal seven-ninths crimson, outer two-ninths tawny yellow; a black patch at end of cell, and an interrupted black band beyond the middle. One of the three has the black bands on forewing more extended.

Length of forewing: 26 mm. Expanse: 59 mm.

Habitat. Goodenough Island, May 1913 (A. S. Meek), 3 ♂♂.

35. *Seiraretia approximans*, sp. nov.

♂. Allied *clara* Holl., but larger and paler.

Antennae black; pectus pale crimson; head and thorax olive-cinnamon; a black spot on the patagia; abdomen yellow ringed with orange, basal segment pale crimson.

Forewing salmon-cinnamon **not** red-brown; strigilated with black but less densely than in *clara*, the strigilations longer and on parts of disc crowded together so as to form an ante- and a postmedian band, basal one-third almost without striae.—Hindwing white suffused with pink; abdominal area, margin, and fringe salmon colour; a discocellular black stigma. ♀ larger, differs from ♂ in having a sooty discocellular stigma on forewing, which is only occasionally present in the ♂, and in the whole hindwing being yellowish salmon colour.

Length of forewing: *clara* ♂ 20 mm., ♀ 23 mm.; *approximans* ♂ 23 mm., ♀ 28 mm. Expanse of forewing: *clara* ♂ 44 mm., ♀ 52 mm.; *approximans* ♂ 52 mm., ♀ 64 mm.

Habitat. Manow Mpuapua, German East Africa, 9 ♂♂, 2 ♀♀.

(Sir George Hampson considers this an aberration of *clara*, but I think it is a distinct species.)

36. *Seiraretia sordida* sp. nov.

♂. Antennae black; pectus sooty grey; head and thorax sooty brown mixed slightly with yellowish-grey hairs; abdomen greyish yellow with lateral transverse black bands.

Forewing yellowish grey irrorated with black strigilae which in the disc also form a median and postmedian band, and a postdiscal round patch above vein 5; a discocellular black stigma.—Hindwing semivitreous white, veins and costa yellowish, a black discocellular stigma. ♀ Head and thorax brownish cinnamon; abdomen banded yellow and black with pink basal segment.

Forewing brownish cinnamon marked as in ♂.—Hindwing rosy salmon colour with one larger and three small black submarginal spots as well as the stigma.

Length of forewing: ♂ 20 mm., ♀ 27 mm. Expanse: ♂ 46 mm., ♀ 60 mm.

Habitat. Harrar, Abyssinia (G. Kristensen), 3 ♂♂, 1 ♀.

37. *Turuptiana pellucida*, sp. nov.

♂. Antennae black; head and thorax brownish cinnamon-buff, frons black; abdomen deep orange, four middle segments above black.

Forewing vitreous; base, costal area, inner margin, and above vein 1 brownish cinnamon; three black spots in costal region, and two vertical black lines in the inner area.—Hindwing vitreous, abdominal and costal area brownish cinnamon.

Length of forewing: 24 mm. Expanse: 54 mm.

Habitat. Monte Tolima, Columbia, 3,200 m. = 10,400 ft., January 1910 (A. H. Fassl), 2 ♂♂.

38. *Turuptiana steinbachi*, sp. nov.

♂♀. Antennae black; head olivaceous brown-grey; tegulae olivaceous brown-grey, rest of thorax black; abdomen black, basal and anal segments dark buff.

Forewing differs from *obscura* Schaus in the postmedian black bands being much more sharply curved and angled, in the ground-colour being much darker, and in the antemedian black band being more oblique.—Hindwing in ♂ clear buff with a sooty spot above tornus and two or three minute dark dots here and there, in the ♀ it is olive-cinnamon with double median sooty band and a postdiscal row of irregular spots.

Length of forewing: ♂ 19 mm., ♀ 21 mm. Expanse: ♂ 44 mm., ♀ 48 mm.

Habitat. Tucuman, 1,100 m. = 3,575 ft., January–February 1905 (J. Steinbach), 1 ♂, 1 ♀.

39. *Turuptiana fuscescens*, sp. nov.

♂. Similar to *testacea* Rothsch., but larger and darker.

Antennae black; head buff suffused with fuscous grey-brown; tegulae basal half buff, outer half fuscous grey-brown, rest of thorax sooty brown-grey; abdomen testaceous yellow, heavily clothed with dirty fuscous hairs.

Forewing fuscous brown-grey with postmedian darker shadow band, nervure darker.—Hindwing similar with abdominal one-third clothed with long darker hair.

Length of forewing: 21 mm. Expanse: 48 mm.

Habitat. Rio Huacamayo, Carabaya, 3,100 ft., June 1904 (G. Ockenden), 4 ♂♂.